**REPORT OF A CASE OF BILATERAL FRONTAL SINUS
EMPYEMA, SUBDURAL AND SUBPERIOSTEAL
ABSCESS WITH RECOVERY.**

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Carl Dunn, a minor, aged 19 years, came under observation July 29, 1921, complaining of headache, pain and swelling over frontal region, fever, and nasal obstruction and discharge.

Two weeks previously patient got a "cold in his head" which was accompanied by considerable nasal discharge. On July 17 the symptoms complained of began. Headache, located in frontal region, throbbing in character, especially on movement, has increased in intensity to present date. Pain and tenderness on pressure over frontal region is constant and severe. Swelling began in left upper eyelid, then involved frontal area and right upper eyelid; subsiding in right upper eyelid after two days, but persisting in frontal region and left upper eyelid. Temperature varied from 99 to 103. Nasal discharge has been profuse and has character of pus. Nasal obstruction has been constant, especially on left side, most of life. General and previous history negative, except for frequently repeated "colds in head."

11:00 A. M. Examination reveals a well-developed and nourished man of about 20 years, who appears to be in considerable pain, though very sluggish and toxic. Pulse 68, irregular. Temperature 99.6.

Head. There was a swelling of the frontal region extending about an inch and half on each side of the midline, to the hair line, and down into the upper left eyelid, closing the left eye. It was tender to touch and fluctuated on palpitation. On aspiration in frontal region pus was obtained. Eyes—R. V. 20/15 L. V.? Pupils pin point in size, due to morphine. Conjunctiva and media of right eye appeared normal, but there was a swelling of the nerve head about two diopters. Nose—Marked deviation of septum to the left. Mucosa was inflamed and a large amount of yellow pus found in all meati of left side; small amount in right side. All sinuses transilluminated poorly.

X-ray of sinuses. Lateral view showed large, deep frontal sinuses. Antero posterior view under exposed and sinuses failed to show up. Another view taken just before operation, but not read till after, showed clouding of all sinuses.

General examination. Heart irregular, no murmurs. Otherwise negative. Spinal puncture, spinal fluid clear, under great pressure.

Laboratory reports: Pus—Smear showed staphylococci. Spinal fluid—Cell count 10; globulin tests negative; W. B. C. 14,000. Urine negative. A preoperative diagnosis was made of subperiosteal frontal abscess empyema of frontal and ethmoidal sinuses and subdural abscess and immediate operation was advised.

Operation. Performed at 2:30 P. M., July 29, 1921, at Sparks Memorial Hospital. Usual preparation for Killian operation. Ether anesthesia. As most of our symptoms pointed to a left-sided infection, a left Killian incision was made and a large subperiosteal abscess over the frontal region was drained at this time. No communicating sinus was found. On opening into the left frontal sinus through a very thick outer table, the sinus was found to be full of pus. After completely uncovering the left sinus pus was found coming from the right side. Our incision was then continued across and the right sinus completely uncovered. An opening due to necrosis was found through the left orbital roof. The orbital roofs were removed, the superciliary ridge being left on both sides. The ethmoids were then opened up and curetted, making a large opening into the nose on both sides. Search was then made for a sinus through the inner table, which was found low down near the floor of the sinus and the midline on the left side. It was very small, but pus was oozing through. Starting at this point, the inner table was removed, uncovering a large subdural abscess. The inner table was removed over the whole abscess, a space of at least two square inches being uncovered. As the patient was not doing well at this time we thought best to cut short the toilet of our operative field and putting in a loose gauze pack through the nose and external wound, we left the external wound nearly wide open. Time of operation, 1 hour and 15 minutes.

Post operative recovery was uneventful except for two convulsions on the eighth day. These probably were due to the packing in wound producing too much pressure, for after this was changed no more convulsions took place.

In October, under local anesthesia, the frontal scar was resected and a fairly large depression obliterated. The patient has been working in the mines since then. We might also add that there is a good cosmetic result. A very small external sinus still remains, which is closed part of the time and will be taken care of soon.

Comment: I present this case as a matter of record and not because there was an unusual features to it or because of any unusual skill or treatment by me that brought about the desired result, recovery of the patient.